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(54) Abstract Title
Point of sale display apparatus

(57) An aluminium point of sale display apparatus attached to an airline cabin trolley, comprises a collapsible frame 2 having a bridge piece 2a and two opposing side pieces 2b which are secured to bridge 2a by hinges 2c, allowing the structure to be collapsed when not in use. Bridge piece 2a defines a container which can be used to carry and/or display articles. When in an upright position, spaces between bridge 2a and side pieces 2b can accommodate containers such as a cash box 4 and/or trays 3, 5 (having a holder 6 comprising a rigid strip with a groove to hold a information sign 7) which are securely attached to the upper edges of side pieces 2b by lips 13a, 13b. Removable wireframe hooks 10 for hangable display merchandise or carry bags are looped around U-shaped slots 9 on sides 2b. A key/slot arrangement 12a, 12b in either the frame or a storage container allows the use of hanger display 8.

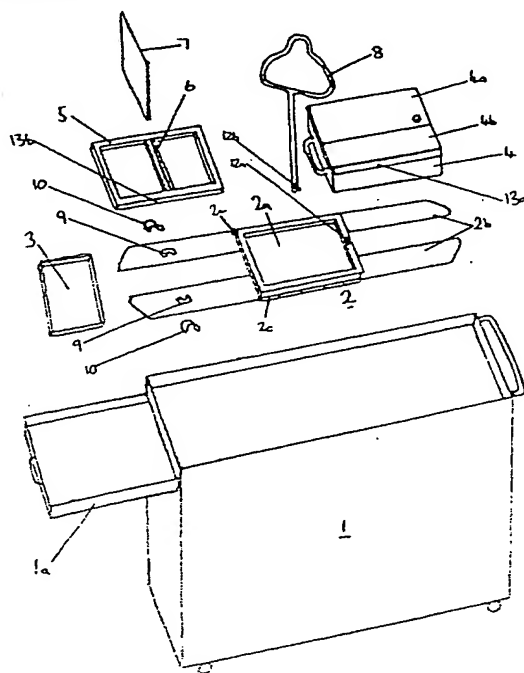


FIGURE 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1985

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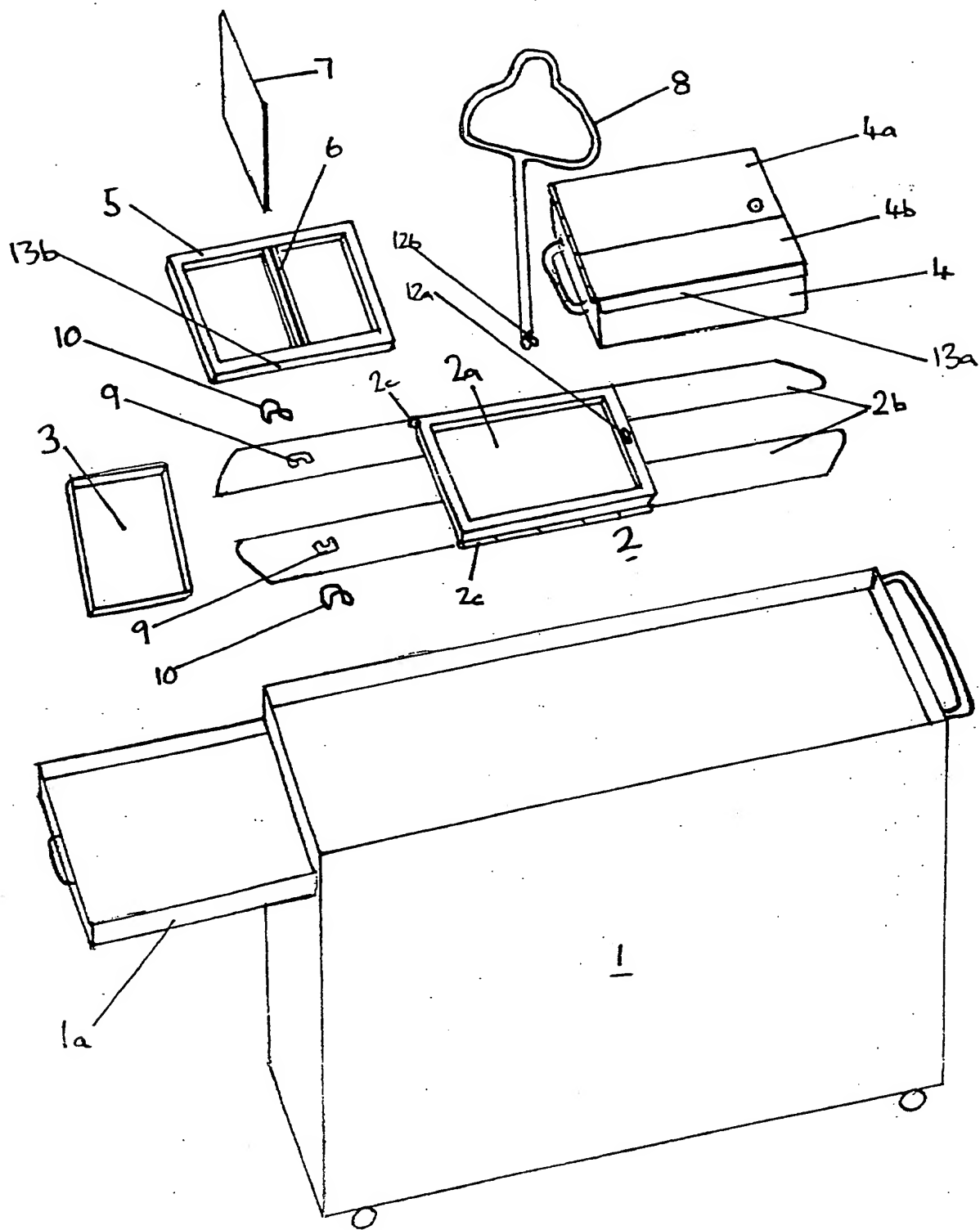


FIGURE 1

1/2

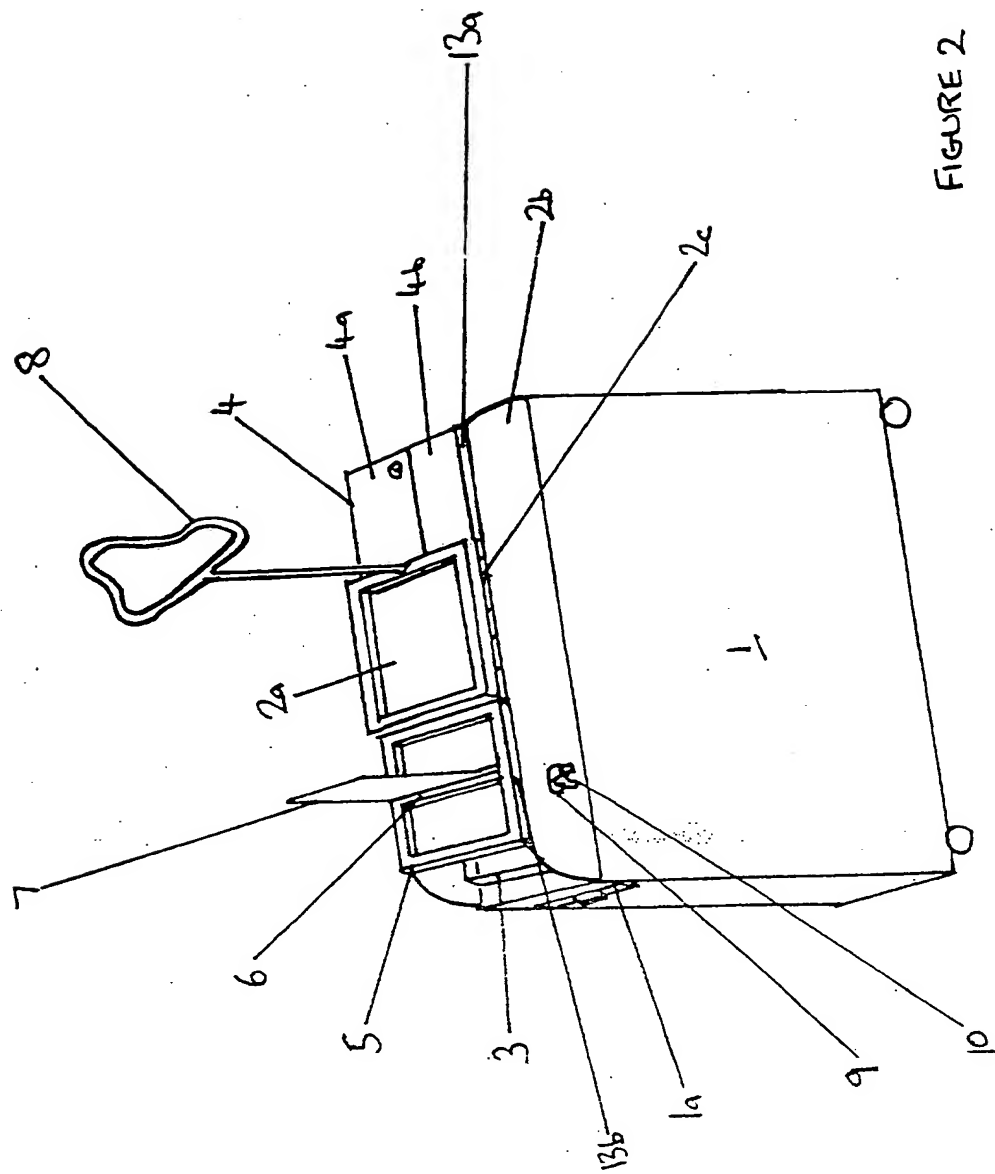


FIGURE 2

POINT OF SALE DISPLAY APPARATUS

This invention relates to a point of sale display apparatus suitable for carriage on an airline cabin crew sales trolley which may be used for the storage and display of products for sale

It is well known that cabin crew provide service to passengers at their seats. Such services include provision of food and beverages and the sale of other goods, such as duty-free jewellery, perfumes, cosmetics, clothes and the like. Goods are usually transported on the aircraft using a trolley which is of suitable dimensions to allow it to be transported down the narrow aisles of an aircraft. The limited space on a commercial passenger aircraft does not permit permanent displays of merchandise and it is common to store goods for most of the flight and provide a temporary display of merchandise on the top of a standard cabin crew trolley. The display must be removed if further beverages or food are to be served from the trolley. In addition, due to the limited time of flight, the display must be easily and quickly set up and removed.

It is an object of the invention to provide a portable and attractive point of sale display apparatus which is both functional in use yet easily stored.

In accordance with the present invention there is provided a point of sale display apparatus for an airline cabin crew trolley comprising;

a collapsible frame having two side pieces of similar dimensions hingedly attached to two opposing sides of a bridging piece, the frame being collapsible from an upright display position where the side pieces are disposed substantially perpendicularly to the bridging piece to a flat storage position where the side pieces are disposed substantially parallel to the

bridging piece, the side pieces extending beyond the two opposing sides of the bridging piece so as to define, in the upright position, spaces adjacent and below the bridging piece for the insertion of storage containers and/or display goods.

In addition, the apparatus may comprise 1 or more storage containers configured to fit in spaces provided by the frame when in its upright position. Preferably, the bridge piece itself is provided in the form of a container and may be in the form of a rectangular plate having a peripheral ridge extending from its upper surface thereby defining a container for the carriage of display and/or sale articles. Optionally, the bridge piece may comprise a tubular rectangular frame in which a tray or the like can be held.

Conveniently the storage container may comprise a cash box so that payment for goods can be collected. Optionally, the cash box may incorporate a platform or space for carrying a credit card verification machine for effecting credit card payment.

Another convenient form of storage container is a tray. Optionally, the tray may incorporate a holder for receiving an information display such as an advertisement for a promotional product. Equally such a holder could be provided on any upper surface of a storage container carried by the apparatus. Conveniently, the holder may be provided in the form of an upwardly extending length of rigid material fixed to the upper surface of the tray, the length of material having a groove opening to its upper surface for the receipt of the information display.

Preferably the storage containers comprise means for attachment to the upper edges of the side pieces when the frame is in its upright position, thereby providing additional stability to the assembly. Conveniently, the means for attachment may comprise a lip extending from two opposing sides

of the container and configured to receive the upper edges of the side pieces when the frame is in its upright position.

Optionally, the apparatus may further comprise a hanger display attachable to the frame or a storage container. For example, the hanger display may be attachable by means of a key protruding from near the end of the hanger display insertable into a complementary slot provided on the bridge piece of the frame.

In addition, the apparatus may further comprise stabilising means for stabilising the upright position of the frame, for example a storage container configured to fit snugly between the upstanding side pieces of the frame when the apparatus is in its upright position and located between two upstanding edges of the upper surface of an airline cabin crew trolley.

As another option, the side pieces may comprise means for attachment of removable hooks which can be used, say, for holding carrier bags or display items. In one example, the means for attachment of hooks comprises a slot and the hook comprises a complementary attachment piece which fits in the slot. Alternatively, hooks may be removably attached elsewhere on the frame by, say, hooking over the perimeter of a storage container.

Most cabin crew trolleys have a tray provided on their top surface. Typically the walls of this tray will be up to about 30mm high, in some cases as little as 15mm high. The perimeter of such a tray is typically rectangular and has sides with dimensions of about 280mm x 800mm. Conveniently, an apparatus according to claim 1 of the present invention can be proportioned to fit into such a space when in its flat storage position. This allows the apparatus to be stored safely with the trolleys during take off and landing of the aircraft.

To minimise the weight without compromise to strength or durability, the apparatus may be made substantially entirely from aluminium or an aluminium alloy. The frame and storage containers can be made from the sheet metal and other accessories from tubes of the metal. The metal apparatus may conveniently be decorated in the airlines colours using a coloured polyester powder coating. Alternatively, some or all components may be made from a durable plastics material which may be dyed to the desired colours.

One embodiment of the invention will now be described by way of example only with reference to the following drawings in which:

Figure 1 shows an exploded view of an embodiment of the invention with a conventional cabin crew trolley illustrating the separable parts of the apparatus.

Figure 2 shows the embodiment of Figure 1 assembled on a cabin crew trolley

As can be seen from Figure 1, the point of sale display apparatus comprises a collapsible frame 2 (shown in its collapsed flat storage position) which has dimensions similar to those of the tray provided on the upper surface of a cabin crew trolley 1. The frame 2 comprises a bridging piece 2a provided in the form of a display tray which is attached on two opposing sides to two similar side pieces 2b by hinges 2c. Figure 2 shows the display apparatus in its upright display position. As can be seen, in the upright position the side pieces 2b of the frame 2 are prevented from splaying by the upstanding perimeter of the tray on the upper surface of the trolley 1. A storage container 3, which has a width similar to that of the bridging piece 2a can be slid between the upright side pieces 2b providing additional stabilisation at the foot of the display apparatus. The storage container 3 may itself be used for

storing merchandise, pens, leaflets or the like. When the apparatus is collapsed for storage the container 3 may be stored in the drawer 1a of the trolley 1.

Other components of the display apparatus include a cash box 4 and a second storage container 5. Storage container 5 again has a width similar to the bridge piece 2a and can be positioned adjacent to and in alignment with the bridge piece 2a atop the side pieces 2b of the frame 2. The perimeter of the storage container 5 is provided with a lip 13b which hooks over the upper edge of side pieces 2b to secure the storage container 5 in position and provide additional stability to the frame 2. Bisecting the upper surface of storage container 5 is a display holder 6 which comprises a rigid strip with a groove along its centre for receiving an information display 7 which will generally comprise a transparent plastic frame carrying an advertisement or the like. The display holder 7 and storage container 5 can be laid flat for storage atop the collapsed frame 2 or may be stored in the drawer 1a of the trolley 1 when the apparatus is not in use.

Cash box 4 again has a width similar to that of bridge piece 2a so that it can be slid between the upright side pieces 2b of frame 2. The cash box 4 will likely be deeper than the storage container 5 but no deeper than the upright side pieces 2b are high. The cash box 4 is again provided with a lip 13a, similar to lip 13b on two opposing sides to allow its position to be secured to the top of the frame 2 and provide further stability to the upright apparatus. The lid of the cash box 4 is split to provide a lockable portion 4a for the containment of cash and a platform 4b on which apparatus such as credit card verification machine or a cheque printer may be carried. The cash box 4 is provided at its rear end with a handle 4c to permit easy transport of the box for secure storage.

The apparatus illustrated further comprises a hanger display 8 for the display

of T-shirts, ties, hats and/or other hangable merchandise. At the bottom end of the hanger display is a key 12b which can be removably locked into complementary keyhole 12a on the perimeter of bridge piece 2a. The hanger display 8 can be laid flat for storage atop the collapsed frame 2 or in the drawer 1a of the trolley 1.

Inverted U-shaped slots 9 are provided in the side pieces 2b of frame 2. The material protruding at the centre of the U-shaped slot may be bent slightly outwardly from the upright frame 2. Suitably shaped wireframe hooks 10 are provided which can be looped around the centre of the inverted U-shaped slots 9 when the apparatus is assembled thus providing a convenient place to carry bags or hangable display merchandise. The hooks 10 can be stored in the cash box 4 or the tray 1a when the apparatus is to be stored.

Aside from the cash box 4 which must necessarily have a certain depth to carry coins, none of the components of the described apparatus need have a depth (when not assembled) of more than about 15mm and can easily be provided to be less than 30mm deep. All other dimensions are chosen to provide convenient spaces for storage with a total top surface area, when assembled, no greater than that of the top of the trolley 1.

It is to be understood that the foregoing represents just one possible embodiment of the invention, many alternatives of which will occur to the skilled person without departing from the true scope of the invention. In particular, it is to be appreciated that not all the elements described in the embodiment are essential and any combination of these with or without additional elements may be incorporated into the apparatus of the invention.

CLAIMS

1. A point of sale display apparatus for an airline cabin crew sales trolley comprising;

a collapsible frame having two side pieces of similar dimensions hingedly attached to two opposing sides of a bridging piece, the frame being collapsible from an upright display position where the side pieces are disposed substantially perpendicularly to the bridging piece to a flat storage position where the side pieces are disposed substantially parallel to the bridging piece, the side pieces extending beyond the two opposing sides of the bridging piece so as to define, in the upright position, spaces adjacent and below the bridging piece for the insertion of storage containers and/or display goods.

2. A point of sale display apparatus as claimed in claim 1 further comprising 1 or more storage containers configured to fit in spaces provided by the frame when in its upright position.

3. A point of sale display apparatus as claimed in claim 1 or claim 2 wherein the bridging piece comprises a rectangular plate having a peripheral ridge extending from its upper surface thereby defining a container for the carriage of display and/or sale articles.

4. A point of sale display apparatus as claimed in claim 2 or claim 3 wherein a storage container is provided in the form of a cash box.

5. A point of sale display apparatus as claimed in claim 4 wherein the cash box has a surface for carrying a credit card verification apparatus and a door allowing access to monies contained within the cash box.

6. A point of sale display apparatus as claimed in any one of claims 2 to 5 wherein a storage container is provided in the form of a tray, the tray comprising a holder for receiving an information display.

7. A point of sale display apparatus as claimed in claim 6 wherein the holder comprises an upwardly extending length of rigid material fixed to the upper surface of the tray, the length of material having a groove opening to its upper surface for the receipt of an information display.

8. A point of sale display apparatus as claimed in any one of claims 2 to 7 wherein the storage containers comprise means for attachment to the upper edges of the side pieces when the frame is in its upright position, thereby providing additional stability to the assembly.

9. A point of sale display apparatus as claimed in claim 8 wherein the means for attachment comprises a lip extending from two opposing sides of the container and configured to receive the upper edges of the side pieces when the frame is in its upright position.

10. A point of sale display apparatus as claimed in any preceding claim further comprising a hanger display attachable to the frame or a storage container.

11. A point of sale display apparatus as claimed in claim 10 wherein the hanger display is attachable by means of a key insertable into a complementary slot provided on the frame.

12. A point of sale display apparatus as claimed in any preceding claim further comprising stabilising means for stabilising the upright position of the frame.

13. A point of sale display apparatus as claimed in claim 12 wherein the stabilising means comprises a storage container configured to fit snugly between the upstanding side pieces of the frame when the apparatus is in its upright position and located between two upstanding edges of the upper surface of an airline cabin crew trolley.

14. A point of sale display apparatus as claimed in any preceding claim wherein the side pieces comprises means for attachment of removable hooks.

15. A point of sale display apparatus as claimed in claim 14 wherein the means for attachment of hooks comprises a slot and the hook comprises a complementary attachment means which fits in the slot.

16. A point of sale display apparatus as claimed in any preceding claim made substantially entirely from aluminium or an aluminium alloy coated with a polyester powder coating.

17. A point of sale display apparatus as claimed in any preceding claim wherein, in its flat storage position, the frame has dimensions of 30mm x 280mm x 800mm or less.

18. A point of sale display apparatus as claimed in claim 17 wherein the frame has dimensions of 15 mm x 280mm x 800mm or less.

19. A point of sale display apparatus substantially as described herein and with reference to the Figures 1 and 2.



INVESTOR IN PEOPLE

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Claims searched: All (1 to 19)

Examiner: David J Evans
Date of search: 6 April 2001

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): A4L (LAAB, LAAD, LAAR, LAAT, LAAW, LAL, LAKA, LAKF, LBPF, LBPN)

Int Cl (Ed.7): B62B (5/00); A47B (31/00, 31/04, 31/06); A47B (23/00, 23/02, 23/04); A47F (5/10)

Other: Online: EPODOC, WPI & PAJ.

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	EP 0919158 A2 (GALTIERI) whole document of general interest.	-
A	WO 97/01475 A1 (FLEX CONCEPTS) whole document of interest, especially in relation to elements 4 & 16 of fig.2.	-
A	US 5427292 A (ROUSCH) in particular see fig 1 & abstract.	-
A	US 4972781 A (MONTGOMERY) see whole document.	-
A	US 4820003 A (LLOYD) whole document of interest.	-
A	DE 4005549 A1 (CADDIE) of general interest; see fig 2 and abstract translations.	-

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